Material Safety Data Sheet(MSDS)

1. Product and Company Identification

Product Name: Malic acid 4-Me ester

Catalog Number: BCN4209

CAS Number: 66178-02-7

Company: Sichuan BioCrick Biotech Co., Ltd.

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2. Hazards identification:

2.1 GHS classification

PHYSICAL HAZARDS: Not classified
HEALTH HAZARDS: Not classified
ENVIRONMENTAL HAZARDS: Not classified

2.2 GHS label elements, including precautionary statements

Pictograms or hazard symbols: None
Signal word: No signal word
Hazard statements: None
Precautionary statements: None

3. Composition/data on components:

Purity: >97%

Formula: $C_5H_8O_5$

Molecular Weight: 148.1

4. First aid measures:

After Inhalation:
If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.

After skin contact:
Flush with copious amounts of water; remove contaminated clothing and shoes; call a physician;Take victim to hospital immediately; call a physician.

After eye contact:
Check for and remove contact lenses and flush with copious amounts of water; assure adequate flushing by separating the eyelids with fingers; call a physician.

After swallowing:
If swallowed,do NOT induce vomiting.wash out mouth with copious amounts of water; call a physician.

5. Fire fighting measures:

Conditions of flammability:
Not flammable or combustible.

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters:
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products:
Hazardous decomposition products formed under fire conditions. Carbon oxides, nitrogen oxides (NOx), Sulphur oxides.

6. Accidental release measures:

Personal precautions:
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions:
Do not let product enter drains. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up:
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage:

Precautions for safe handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

Conditions for safe storage:
Keep container tightly closed in a dry and well-ventilated place.Recommended storage temperature: -20°C for long term,2-8°C for short term.

8. Exposure controls and personal protection:

Personal protective equipment as follows:
Contains no substances with occupational exposure limit values.

Respiratory protection:
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143)respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection:
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures:
General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES:

a) Appearance
Powder
b) Odour
no data available
c) Odour Threshold
no data available
d) pH
no data available
e) Melting point/freezing point
no data available
f) Initial boiling point and boiling range
no data available
g) Flash point
no data available
h) Evaporation rate
no data available
i) Flammability (solid, gas)
no data available
j) Flammability or explosive limits
no data available
l) Vapour density
no data available
m) Relative density
no data available
n) Water solubility
no data available
o) Partition coefficient:
no data available
p) Autoignition temperature
no data available
q) Decomposition temperature
no data available
r) Viscosity
no data available
s) Explosive properties
no data available
t) Oxidizing properties
no data available

10. Stability and reactivity:

Chemical stability:
Stable under recommended storage conditions.

Possibility of hazardous reactions:
No data available.

Conditions to avoid:
No data available.

Materials to avoid:
Strong oxidising/reducing agents, strong acids/alkalis.

11. Toxicological information:

Acute Toxicity:
No data available

Skin corrosion/irritation:
No data available

Serious eye damage/irritation:
No data available

Germ cell mutagenicity:
No data available

Carcinogenicity:
IARC = No data available;NTP = No data available

Reproductive toxicity:
No data available

12. Ecological information:

Toxicity:
No data available

Persistence and degradability:
No data available

Bioaccumulative potential:
No data available

Mobility in soil:
No data available

Results of PBT and vPvB assessment:
No data available

Other adverse effects:
May be harmful to the aquatic environment.

13. Disposal consideration:

General notes:
Dispose of in accordance with prevailing country, federal, state and local regulations

14. Transport information:

DOT (US):
This substance is considered to be non-hazardous for transport.

ADR/RID:
Not dangerous goods

IMDG:
Not dangerous goods

IATA:
Not dangerous goods

Transport hazard class(es):
Does not meet the criteria for classification as hazardous for transport.

15. Regulations:

Safety, health and environmental regulations/legislation specific for the substance or mixture:
no data available

Chemical Safety Assessment:
no data available

16. Additional information:

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

End of safety data sheet